SECTION 1	PRODUCT AND COMPANY INFORMATION
TRADE NAME:	DAP - Diammonium Phosphate
CHEMICAL NAME:	Dibasic Ammonium Phosphate
CAS NUMBER:	7783-28-0
CHEMICAL FAMILY:	Ammonium Phosphates—Inorganic Salt
SYNONYMS:	Ammonium Phosphate Dibasic Secondary Ammonium Phosphate Diammonium Hydrogen Phosphate Fertilizer Grade Ammonium Phosphate DAP 18 - 46 - 0
PRIMARY USE:	Crop nutrient
COMPANY INFORMATION:	THE MOSAIC COMPANY 3033 Campus Drive Plymouth, MN 55441 www.mosaicco.com 800-918-8270 or 763-577-2700 8 AM to 5 PM Central Time US
EMERGENCY TELEPHONE:	**EMERGENCY OVERVIEW** **24 Hour Emergency Telephone Number:** **For Chemical Emergencies:** **Spill, Leak, Fire or Accident** **Call CHEMTREC** **North America: (800) 424-9300 (reference CCN201871)** **Others: (703) 527-3887 (collect)**

SECTION 2 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW :

Health Hazards:	Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Diammonium phosphate is generally recognized as safe when used in accordance with good manufacturing practice.
Physical Hazards:	Slippery when wet
Physical Form:	Solid
Appearance:	Gray, tan, brown or black granules
Odor:	Slight ammonia odor
Toxicity:	Non-toxic

NFPA HAZARD CLASS	
Health:	1
Flammability:	0
Instability:	0
Special Hazard:	None

HMIS HAZARD CLASS	
Health:	1
Flammability:	0
Physical Hazard:	0
PPE:	Section 8

WHMIS HAZARD CLASS	
Symbol	N/A
Classification Sub Class (N/A)	Not WHMIS Controlled

POTENTIAL HEALTH EFFECTS:	Eye:	Contact may cause mild eye irritation including stinging, watering and redness.
	Skin:	Contact may cause mild irritation including redness and a burning sensation. No harmful effects from skin absorption have been reported.
	Inhalation (Breathing):	Studies by other exposure routes suggest a low degree of hazard by inhalation under normal circumstances.
	Ingestion (Swallowing)	Low degree of toxicity by ingestion.
	Signs and Symptoms:	Effects of overexposure may include irritation of the nose, throat and digestive tract, nausea, vomiting, diarrhea, coughing and shortness of breath.
	Cancer:	Data not available.
	Target Organs:	Data not available.
	Developmental:	Data not available.
	Other Comments:	Effects of overexposure to dusts can include irritation of the eyes and respiratory tract, pneumoconiosis (dust congested lungs), pneumonitis (lung inflammation), coughing, vomiting, diarrhea, abdominal pain and jaundice.
	Pre-Existing Medical Conditions:	Respiratory (asthma-like) disorders, dermatitis
POTENTIAL ENVIRONMENTAL EFFECTS:	DAP is considered biodegradable and is taken up as a nutrient by vegetation. Large spills can harm or kill vegetation. May release ammonium ions that are toxic to fish. Un-ionized ammonia concentrations above 0.02 mg/l are considered toxic in fresh water. May release phosphates which will result in algae growth, increased turbidity, and depleted oxygen. At extremely high concentrations, this may be hazardous to fish or other marine organisms. Release to watercourses may cause effects downstream. Fish 96 hour LC50, OECD Guidelines 203 (rainbow trout): >86mg/L; Non-toxic to aquatic organisms as defined by USEPA.	
SECTION 3	**COMPOSITION INFORMATION ON INGREDIENTS**	
FORMULA:	$(NH_4)_2HPO_4$	
COMPOSITION:	Phosphate as P_2O_5 Nitrogen as N Water Fluorides as F	45.5- 46.5 % 17.5 - 18.3 % 1.5 – 2.6 % 2 – 4 %
SECTION 4	**FIRST AID MEASURES**	
FIRST AID PROCEDURES:	Eyes:	Move victim away from exposure and into fresh air. Flush eyes with plenty of clean water for at least 15 minutes. If symptoms persist, seek medical attention.

	Skin:	Wash contaminated area thoroughly with mild soap and water. If chemical or solution soaks through clothing, remove clothing and wash contaminated skin. If irritation develops and persists after washing, seek medical attention.
	Inhaled:	If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.
	Ingestion:	If person is conscious, immediately give water or milk. Do not induce vomiting. Seek medical attention. If person is unconscious, do not give anything by mouth.
NOTE TO PHYSICIAN:	If person has been exposed to concentrated decomposition products, treat symptomatically and watch for delayed symptoms of pulmonary edema.	
SECTION 5	**FIRE FIGHTING MEASURES**	
FLAMMABLE PROPERTIES:	Flash Point:	Not applicable
	OSHA Flammability Class:	Not applicable
	LEL/UEL:	LEL: Not applicable/ UEL: Not applicable
	Auto-Ignition Temperature:	Not applicable
EXTINGUISHING MEDIA:	Use extinguishing agent suitable for type of surrounding fire. Avoid excessive water to minimize runoff. Small fires: Water spray, foam, dry chemical or CO_2 Large fires: Water spray, fog or foam	
PROTECTION OF FIREFIGHTERS:	Positive pressure, self-contained breathing apparatus is required for all firefighting activities involving hazardous materials.	
SECTION 6	**ACCIDENTAL RELEASE MEASURES**	
RESPONSE TECHNIQUES:	Stay upwind and away from spill (dust hazard). Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Notify appropriate federal, state, and local agencies as may be required (see Section 15). Minimize dust generation. Sweep up and package appropriately for disposal.	
RELEASE NOTES :	If spill could potentially enter any waterway, including intermittent dry creeks, contact the local authorities. If in the US, contact the US COAST GUARD NATIONAL RESPONSE CENTER toll free number 800-424-8802. In case of accident or road spill notify: CHEMTREC in North America at 800-424-9300; from elsewhere, contact CHEMTREC at 703-527-3887 (collect).	

SECTION 7	HANDLING AND STORAGE	
HANDLING:	The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 8). Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Wash contaminated clothing or shoes. Use good personal hygiene practices.	
STORAGE:	Use and store this material in cool, dry, well-ventilated areas. Store only in approved containers. Keep container(s) tightly closed. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Material may absorb moisture from the air.	
SECTION 8	**EXPOSURE CONTROLS / PERSONAL PROTECTION**	
ENGINEERING CONTROLS:	Use process enclosure, general dilution ventilation or local exhaust systems where necessary to maintain airborne dust concentration below the OSHA standards or in accordance with applicable regulations.	
PERSONAL PROTECTIVE EQUIPMENT (PPE):	Eye/Face:	Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended.
	Skin:	The use of cloth or leather work gloves is advised to prevent skin contact, possible irritation and absorption.
	Respiratory:	Protection is not required where adequate ventilation conditions exist. Use a dust mask or other appropriate respiratory protection where engineering controls are not feasible or during operations that generate airborne concentrations exceeding the relevant standards.
	Other:	A source of clean water should be available in the work area for flushing eyes and skin.
GENERAL HYGIENE CONSIDERATIONS:	Wash thoroughly after handling Use adequate ventilation	
EXPOSURE GUIDELINES:	OSHA Permissible Exposure Limits (PEL):	Particulates Not Otherwise Specified: 5 mg/m3 TWA (respirable); 15 mg/m^3 TWA (total) Ammonia: 50 ppm (35 mg/m^3) TWA
	ACGIH Threshold Limit Value (TLV):	Ammonia: 25 ppm (18 mg/m^3) TWA; 35 ppm (27 mg/m^3) STEL
SECTION 9	**PHYSICAL AND CHEMICAL PROPERTIES**	
Note: Unless otherwise stated, values in this section are determined at 20°C (68°F) and 760 mm Hg (1 atm).		
Flash Point:	Not applicable	
Flammability/ Explosive Limits (%):	LEL: Not applicable/UEL: Not applicable	
Auto-Ignition Temperature:	Not applicable	
Appearance:	Gray, tan, brown or black granules	

Physical State:	Solid
Odor:	Slight ammonia odor
pH:	7.0 – 8.0 in a 1% solution
Vapor Pressure (mm Hg):	Not applicable
Vapor Density (air=1):	Not applicable
Boiling Point:	Not applicable
Freezing/Melting Point:	Decomposes at 310°F (155 °C) before melting
Solubility in Water:	80% - 95%
Specific Gravity:	Not applicable
Volatility:	Not applicable
Bulk Density:	Loose 56 - 61 lbs./ft^3 (895 - 960 Kg/m^3); Packed 58 - 64 lbs./ft^3 (930 - 1025 Kg/m^3)
SECTION 10	**STABILITY AND REACTIVITY**
Chemical Stability:	Stable under normal conditions of storage and handling. Decomposes at 310°F (155°C).
Conditions to Avoid:	Extreme temperatures
Incompatible Materials:	Avoid contact with alkaline materials
Hazardous Decomposition Products:	If heated to the point of decomposition, oxides of phosphorus, oxides of nitrogen and ammonia (NH_3) may be released.
Corrosiveness:	May be corrosive to iron and mild steels, aluminum, zinc and copper
Hazardous Polymerization:	Will not occur
SECTION 11	**TOXICOLOGICAL INFORMATION**
Acute Oral Toxicity	LD_{50} (rat, oral) > 5000 mg/kg bw
Acute Inhalation Toxicity	Data not available
Acute Dermal Toxicity	LD_{50} (rat, dermal) > 5000 mg/kg bw
Mutagenesis	Data not available
Target Organ	Data not available
Developmental Toxicity	Data not available
Carcinogenicity	The ingredient(s) of this product is (are) not classified as carcinogenic by NTP (National Toxicology Program), IARC, or OSHA

SECTION 12	ECOLOGICAL INFORMATION
ECOTOXICOLOGY:	May release ammonium ions that are toxic to fish. Un-ionized ammonia concentrations above 0.02 mg/l are considered toxic in fresh water. May release phosphates which will result in algae growth, increased turbidity, and depleted oxygen. At extremely high concentrations, this may be hazardous to fish or other marine organisms. Release to watercourses may cause effects downstream. Fish 96 hour LC_{50}, OECD Guidelines 203 (rainbow trout): >86mg/L Non-toxic to aquatic organisms as defined by USEPA.
SECTION 13	**DISPOSAL CONSIDERATIONS**
	Properly characterize all waste materials. Consult federal, state/provincial and local regulations regarding the proper disposal of this material.
SECTION 14	**TRANSPORTATION INFORMATION**
Regulatory Status	Not regulated
Proper Shipping Name	Not applicable
Hazard Class	Not listed in the hazardous materials shipping regulations (49 CFR, Table 172.101) by the U.S. Department of Transportation, or in the Transport of Dangerous Goods (TDG) Regulations Canada.
Packing Group	Not applicable
Identification Number	HTS 3105.30.00
Guide Number	Not applicable
MARPOL	Based on the United Nations Globally Harmonized System for Classification and Labeling of Chemicals (UN GHS) this product is not harmful to the marine environment (non-HME) based on not exceeding the parameters or criteria below[1]: • Acute Aquatic Toxicity Category 1; and/or • Chronic Aquatic Toxicity Category 1 or 2; and/or • Carcinogenicity[2] Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation; and/or • Mutagenicity[2] Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation; and/or • Reproductive Toxicity[2] Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation; and/or • Specific Target Organ Toxicity Repeated Exposure[2] Category 1 combined with not being rapidly degradable and having high bioaccumulation; and/or • Solid bulk cargoes containing or consisting of synthetic polymers, rubber, plastics, or plastic feedstock pellets (this includes materials that are shredded, milled, chopped or macerated or similar materials). Notes: 1) The criteria are based on UN GHS, fourth revised edition (2011). For specific products (e.g. metals and inorganic metal compounds) guidance available in UN GHS, annexes 9 and 10 are essential for proper interpretation of the criteria and classification and should be followed. 2) Products that are classified for Carcinogenicity, Mutagenicity, reproductive toxicity or Specific Target Organ Toxicity Repeated Exposure for oral and dermal hazards or without specification of the exposure route in the hazard statement.

SECTION 15	REGULATORY INFORMATION				
CERCLA:	Not listed				
RCRA 261.33:	Not listed				
SARA TITLE III: (Exemptions at 40 CFR, Part 370 may apply for agricultural use, or for quantities of less than 10,000 pounds on-site.)	SARA – 311/312:				
	Acute: Yes	Chronic: No	Fire: No	Pressure: No	Reactivity: No
	SARA – 313: Not listed				
	SARA – 302/304: Not listed				
NTP, IARC, OSHA:	This material has not been identified as a carcinogen by NTP, IARC, or OSHA.				
Canada DSL and NDSL:	DSL: Yes NDSL: Not listed				
TSCA:	Listed on the TSCA Inventory				
CA Proposition 65: (Health & Safety Code Section 25249.5)	Warning: This product contains substances known to the State of California to cause cancer and/or birth defects or other reproductive harm.				
WHMIS:	This MSDS has been prepared according to the hazard criteria of the Controlled Product Regulations (CPR) and the MSDS contains all of the information required by the CPR.				
CBSA:	This product does not contain any bovine, ruminant or other animal by-products.				
SECTION 16	**OTHER INFORMATION**				
Disclaimer:	The information in this document is believed to be correct as of the date issued. Nothing herein contained shall be deemed to be a representation or warranty with respect to the product described herein. **NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE, AND ALL SUCH REPRESENTATIONS AND WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED BY MOSAIC.** This information and product are furnished on the condition that the person receiving them shall make their own determination as to suitability of the product for their particular purpose and on the condition that they assume the risk of their use thereof. The conditions and use of this product are beyond the control of Mosaic, and Mosaic disclaims any liability for loss or damage incurred in connection with the use or misuse of this substance.				
Preparation:	The preparation of this MSDS was in accordance with ANSI Z400.1-2010.				
Revision Date:	03/19/2013				
Sections Revised:	1, 2, 6, 7, 9,14,15,16				
MSDS Number:	MOS100011.01				
References:	MARPOL Annex V; The Fertilizer Institute (TFI), 2003; TOXNET				